MATERIA MEDICA AND PHARMACY.

3. *Antagonistic Effects of Calabar Bean and Atropia.*—Dr. KLEINWACHTER states (*Berliner Klinische Wochenschrift*, 1864) that in the ophthalmic department of the hospital at Prague, last August, four boys, engaged in cleaning the room, drank a portion of a solution of atropia, thinking that it contained spirits. Two of the boys either spat out or vomited the fluid, and exhibited no symptoms of poisoning; but the two others, who did not vomit, were distinctly poisoned—one, however, much more so than the other. The symptoms were those of poisoning by belladonna, and consisted of delirium, dilatation of the pupils, feeble pulse, and in one there was coma, alternating with furious delirium. Both the patients were taken to bed, one of them being restrained in a strait-jacket, and cold lotions were placed on their heads. Dr. Kleinwächter happened accidentally to have with him a solution of the Calabar bean extract in glycerine, and, by way of experiment, he gave to the patient who was most affected 10 drops of the solution (6 grains of extract to 1 drachm of glycerine), which in about a quarter of an hour produced violent vomiting. The pulse became stronger and quicker, rose to 75 and then to 80 in the minute, the temperature of the body fell, the delirium abated, the patient became more quiet, consciousness returned, urine was passed with some pain in the urethra, and the pupils became somewhat contracted. In the case of the other patient, who was less affected, some of the extract of Calabar bean was dropped into the eye, but without any good effect, for on the next day the symptoms were almost unchanged, while the patient who had taken the solution of the Calabar bean internally had almost completely recovered. The rapid and striking improvement in one of these cases appears manifestly to be attributable to the administration of the Calabar bean extract, for the patient who was not treated in the same manner showed no improvement for forty-eight hours.—*Brit. and For. Med.-Chir. Rev.*, Jan. 1865.

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4. *Opium and its Alkaloids, and their Therapeutical Effects.*—Two papers have lately been presented to the Imperial Academy of Sciences, one by Prof. CLAUDE BERNARD, the other by Dr. OZANAM. Both authors agree in thinking that the physiological effects of the alkaloids contained in opium are not identical, but they do not each arrive at the same conclusion as to what the effects really are.

Prof. Bernard infers from his experiments on the lower animals, that of the six principles of opium—namely, morphia, narceia, codeia, narcotina, papaverina, and thebaina—only the first three possess the property of inducing sleep, the last three being destitute of that property, and probably serving to modify or counteract the soporific effects of the others. But although morphia, narceia, and codeia are narcotics, their effects are not identical, for each causes sleep in a peculiar manner. Prof. Bernard describes at considerable length the differences observed in his experiments on the lower animals between the effects of morphia, codeia, and narceia. Codeia blunts the sensibility much less than morphia, and does not make the nerves sluggish; narceia produces a kind of sleep which resembles that caused both by morphia and codeia, but at the same time is different from that of either. Narceia is the most narcotic of the alkaloids, but the sleep it produces is characterized by great tranquillity and incapability of being aroused by noise. Prof. Bernard concludes that there are three principal properties in the alkaloids of opium—namely, soporific, stimulating, and poisonous. With regard to narcotic powers, narceia stands first, morphia second, and codeia third. The three other principles—thebaina, papaverina, and narcotina—do not possess soporific properties. In the order of stimulants, the constituents of opium stand as follows: thebaina, papaverina, narcotina, codeia, morphia, narceia. As poisons, they stand in the following order: thebaina, codeia, papaverina, narceia, morphia, narcotina. Prof. Bernard concludes by observing that as in opium the same plant yields products which have very different actions on the animal economy, we ought no longer to believe that plants of the same family ought necessarily to possess the same physiological properties.

M. Ozanam arrives at different conclusions from those of Prof. Bernard, and investigates the subject from a therapeutical point of view, as he has been engaged in doing for the last ten years. He describes six principal alkaloids in opium—namely, morphia, codeia, narcotina, opianine, narceia, and thebaina. Morphia is so well known that he says little of its effects. The therapeutical properties of opianine are but little known. Codeia is sometimes an excitant, sometimes a sedative, and sometimes it stupefies, according to the dose. Narcotina has a well-marked stimulant action, and produces an effect the reverse of that of morphia. Thebaina is an excitant of the cervical part of the spinal cord. Narceia is a valuable sedative, and appears to have a special action on the lumbar portion of the spinal cord. Thus opium is both a sedative and a stimulant; the morphia, the opianine, and the narceia are sedative; the narcotina and the thebaine are stimulant, and codeia stands between the two, partaking of both properties according to the dose.—*Brit. and For. Med.-Chir. Rev.*, Jan. 1865.

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5. *Hypnotic Properties of Bromide of Potassium.*—Dr. DEBOUT relates (*Bull. Gén. de Thérap.*, Aug. 15, 1864) several cases in which great irritability was relieved by means of the bromide of potassium. In one case there was a stricture of the urethra which resisted the treatment by dilatation, because the irritability and febrile excitement were so great as to prohibit the introduction of the catheter with sufficient frequency and regularity. Dr. Debout was therefore induced to employ the bromide, in order, if possible, to cause anæsthesia of the urethral canal, so as to make it insensible to the injurious effects of the catheters. The salt was given in large doses, four grammes (about ʒj) being taken every day. The success of the treatment exceeded all expectation, for as soon as the bromide had been taken, the catheters could be introduced, of greater and greater dimensions, without producing any bad symptoms. The most remarkable circumstance in the case was the stupefying action produced by the bromide, for although the patient had been unable to sleep for a month previous to the treatment, yet as soon as it was administered, and when he had taken only about half a drachm of the salt, he slept all night. Another case was one of neuralgia of the neck of the bladder, preventing the patient, who was a medical man, from riding on horseback and visiting his patients, the nature of the roads preventing him from walking. After a month's trial he lost the painful sensations of which he complained, and resumed his usual avocations; he stated also that he had proved the hypnotic properties of the bromide. In another case the bromide was used to allay an erethism of the pharynx and the neck of the bladder, and the patient was obliged to leave it off, because fifteen grains dissolved in water not only procured him sound sleep during the night, but on the next day he remained in such a state of somnolence as to be unable to attend to his business.

A writer in the *Union Médicale* (Oct. 13, 1864) denies that the bromide of potassium is a true hypnotic, but considers that it causes sleep by the deep sedative effect it produces upon the whole of the nervous system, and secondarily on the circulation. Phthisical patients, tormented by coughing and sweating, notwithstanding the use of opium, have obtained sleep by the means alluded to; and in two cases of organic disease of the heart, with rapidity and intermission of the pulse, præcordial anxiety and dyspnœa, M. Gubler was able, by means of the bromide, to reduce the pulse from 108 to 76, and to relieve the dyspnœa.

The properties of this salt may be summed up by stating that it is a simple moderator of nervous excitement, and that its elective action is specially exerted on the internal integument, the mucous membrane of the isthmus of the throat, that of the pharynx, and that of the genital passages. M. Vigoroux considers it the remedy *par excellence* for the nervous complaints which are so common in large cities, and the cause of which appears to him to be the excess of vascularity of a part of the nervous centres. The bromide, by diminishing the vascularity, becomes the antidote to this condition. Its presence in certain mineral springs explains their sedative action, and these springs may be usefully employed now that the cause of their action is known. Its operation appears to be antagonistic